

LH

Work Order ID 76606

76606

Page 1

November-18-11 9:15:01 AM

Item ID: D206-642-151

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 18/11/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 16/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: M.L.J

Date: 11/11/11 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3804

A

IIN-D206-642

O

100

0.00

100

DOCUMENT CONTROL

DC

0.00

Memo

Document Control

Photocopy bluefile & type labels per PPP D206-642-151

CHG001

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00

110

Skidtubes

0.00

Skidtubes

Memo

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod

M117889/M118735

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 & DT8169D & DT9771.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

11/12/10

SA 11-12-13

SA 11-12-14

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.
 ****no wearplate holes for this skidtube****

17-Deburr tube and blow out chips from inside the tube

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

8/11/12/14

SAD 11-12-14 (1)
DC 11/12/14

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140									
HandFinish	Memo	0.00				1	0	SAD	11-12-14
Hand Finishing									
150	QC3- Inspect Part Finish	0.00							
150									
QC	Memo	0.00				1	0	BE	11-12-14
Quality Control									
160	Skidtubes	0.00							
160									
Skidtubes	Memo	0.00							
Skidtubes	1-Open holes to finished size as per Dwg D3804, (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								

2 SAD 11-12-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Required Date: 16/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC6- Inspect dimensions to drawing	0.00							
170						1	Ø	BE	11-12-14
QC	Memo	0.00							
Quality Control									
180		0.00							
180	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required 2-Bond D2654-1 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting Start Date: <u>7/12/11</u> Time: <u>11-12-14- 7:00</u> Finish Date: <u>11-12-29</u> Time: <u>6:00</u> Pick: Qty Part Number Description Batch A/RSikaflex-291 <u>M119399</u> Sikaflex expire date: <u>12/08-13</u>								

SAD 11-12-14

Dart Aerospace Ltd

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*** 1 ***

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Required Date: 16/01/2012 **Req'd Qty:** 1.00

*** 1 ***

Customer:

Reference:

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190

QC5- Inspect part completeness to step on W/O

0.00

190

QC

Memo

0.00

Quality Control

1 8 BE 11-12-29

W/O:		WORK ORDER CHANGES					
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1

Cust Item ID:

Required Date: 16/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200

0.00

200

Skidtubes

Skidtubes

0.00

Memo

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch

A/RAluminum Rod M117889

3-Grind welds flush as per Dwg D3804.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONE

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

BE 11-12-29

BE 11-12-29

DP 12-1-2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	HandFinishing	0.00							
210									
HandFinish	Memo	0.00							
Hand Finishing	Install D2680-041 Nut Plate as per Dwg D3804								
	LH								
215	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
215									
QC	Memo	0.00							
Quality Control									
220	QC10- Inspect visual per QSI004- ground welds	0.00							
220									
QC	Memo	0.00							
Quality Control									

①

SADP-01-02

12.01.03

8/2/01/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230 QC5- Inspect part completeness to step on W/O-

0.00

230

QC Memo

0.00

Quality Control

8/12/01/03

240 Pressure Wash per QSI005 4.3

0.00

240

HandFinish Memo

0.00

Hand Finishing

1X/2M/12/01/03

250 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

250

Powdercoat Memo

0.00

Powder Coating

START TIME:
 OVEN TEMPERATURE:
 FINISH TIME:

9:20
 320°F
 9:50

1X/2M/12/01/04

m11a480

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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N900040100

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Cust Item ID:

Required Date: 16/01/2012 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Run Start *NR1*

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

260

QC3- Inspect Part Finish

0.00

260

OC

Memo

0.00

Quality Control

270

0.00

270

HandFinishing

0.00

HandFinish

Memo

Hand Finishing

1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.

W/O:		WORK ORDER CHANGES					
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	HandFinishing	0.00							
280									
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive A/RSikaflex-291 <u>M1119508</u> Sikaflex expire date: <u>12/09</u>								
	2- Install wearplate as per dwg								
	2-Wing Walk as per Dwg D3804 and QSI 005 4.4 Batch: <u>M111909J</u>								
290	QC3- Inspect Part Finish	0.00							
290									
QC	Memo	0.00							
Quality Control									

8/12/10

12/10/11

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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300	QC5- Inspect part completeness to step on W/O	0.00							
300		0.00	812/01/16						
QC	Memo								
Quality Control									

310	Packaging	0.00							
310		0.00							
Packaging	Memo								
Packaging	Identify and pack for shipping as per PPP D206-642-151								
	Location: _____								
	PPP Rev: _____								

320	QC21- Final Inspection - Work Order Release	0.00							
320		0.00							
QC	Memo								
Quality Control									

12-01-17

W/O:		WORK ORDER CHANGES					
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Picklist Print

Page 1

November-18-11 9:15:04 AM

Work Order ID: 76606

76606

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC IPP
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620		Manufactured	No			110	Each	14.0000	1				
D2620									**				
Skidtube, 206 Skidtube													

Location	Loc Qty	Loc Code
LG	75471	
71616	14	
71617	3	
74459	6	
74460	2	
	3	

D2647 Manufactured No 110 Each 253.0000 1

D2647

Cap

Location	Loc Qty	Loc Code
LG002	253	
55352	3	
71171	1	
73826	139	
75482	110	

W/O:		WORK ORDER CHANGES					
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D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-04

Purchased

No

180

Each

15,860.00

52

52

CR3212-4-04

Cherry Rivet

**

SAD 11-12-14

Location

Loc Qty

Loc Code

ST331

5870

116471

78

117816

3

118686

1

118840

16

119017

5762

119075

10

st510

9990

119075

9990

D2654-1

Manufactured

No

180

Each

4.0000

1

1

D2654-1

Web

**

SAD 11-12-14

Location

Loc Qty

Loc Code

LG

4

73794

1

73799

1

75475

1

75477

1

B76755

①

D3286-1

Manufactured

No

180

Each

175.0000

2

D3286-1

Doubler

**

SAD 11-12-14

Location

Loc Qty

Loc Code

LG002

175

74111

1

74441

4

74872

59

75484

111

2

November-18-11 9:15:04 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

November-18-11 9:15:04 AM

Work Order ID: 76606

76606

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No

200

Each

461.0000

19

19

D2649

Cross Bolt Spacer

**

SAD 1-12-14

Location

Loc Qty

Loc Code

LG

134

68224

2

71355

2

72704

2

72841

11

73855

117

LG001

327

65317

1

68507

11

73390

8

73857

21

73858

282

73860

4

76793

19

D3286-3

Manufactured No

200

Each

153.0000

2

2

D3286-3

Spacer

**

BE 11-12-29

Location

Loc Qty

Loc Code

LG

72

74870

72

LG001

1

74117

1

LG002

80

75483

80

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Page 4

November-18-11 9:15:04 AM

Work Order ID: 76606

76606

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041 Manufactured No

210

Each

46.0000

1

1

D2680-041

Nut Plate

**

SAD 12-01-02

Location

Loc Qty

Loc Code

LG

1

73334

1

ST020

45

73854

45

375979

1

CR3212-4-03

Purchased

No

210

Each

1,904.000

2

2

CR3212-4-03

Cherry Rivet

**

SAD 12-01-02

Location

Loc Qty

Loc Code

FB

2

110139

2

ST331

1902

114859

902

119017

1000

2

AN960JD416

NAS1149D04631

Purchased

No

210

Each

0.0000

1

1

AN960JD416

Washer

**

M118384C4 M1210112

CCR264SS3-3

Purchased

No

210

Each

1,163.000

2

2

CCR264SS3-3

Cherry Rivet

**

SAD 12-01-02

Location

Loc Qty

Loc Code

FP

2

113973

2

ST311

187

117849

187

ST317

974

119017

974

2

November-18-11 9:15:04 AM

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Page 5

November-18-11 9:15:04 AM

Work Order ID: 76606

76606

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

210

Each

384.0000

1

1

MS27039-4-06

Screw

**

12/01/12

Location

Loc Qty

Loc Code

ST291

384

119075

384

xl

D2651-1

Manufactured

No

270

Each

745.0000

6

6

D2651-1

Plug

**

12/01/12

Location

Loc Qty

Loc Code

FP

745

57869

1

66445

10

69018

2

70839

2

71037

31

73827

699

xl

D2651-3

Manufactured

No

270

Each

1,235.000

6

6

D2651-3

O-Ring

**

12/01/12

Location

Loc Qty

Loc Code

FP

1235

61962

12

73489

223

73828

1000

xl

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Page 6

November-18-11 9:15:04 AM

Work Order ID: 76606

76606

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3873-1 Manufactured No

280 Each 821.0000 14 14

D3873-1

Bushing

**

B 76 792 (x14) M 12/01/11

Location

Loc Qty

Loc Code

ST088

821

64760

1

68247

4

73829

19

73830

16

73832

400

75481

381

D2646 Manufactured No

280 Each 235.0000 1 1

D2646

Aft Cap

**

M 12/01/12

Location

Loc Qty

Loc Code

FP002

218

73294

20

73825

198

FP004

8

68280

5

70945

1

71070

2

FP005

4

71038

4

FP006

5

62678

5

D3805-041 Manufactured No

280 Each 1.6000 1 1

D3805-041

Wearplate Assembly Fwd, Low Gear

**

B 76 77 J (x1) M 12/01/11

Location

Loc Qty

Loc Code

FP001

1

74893

1

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Page 6

W/O:		WORK ORDER CHANGES					
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Picklist Print

Page 7

November-18-11 9:15:04 AM

Work Order ID: 76606

76606

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

280

Each

1,747.000

2

2

MS27039-1-08

**

u 12/01/12

Screw

Location

Loc Qty

Loc Code

ST291

1747

117423

117

118378

130

118910

500

119075

500

119109

500

X Z

MS21042L3

Purchased

No

280

Each

8,753.000

7

7

MS21042L3

**

u 12/01/12

Nut

Location

Loc Qty

Loc Code

ST300

255

117441

16

117885

35

118451

5

118927

199

ST516

6000

119017

6000

ST518

2498

119075

2498

X Z

D3805-045

Manufactured

No

280

Each

5.0000

1

1

D3805-045

**

B376781 (x1) u 12/01/12

Wearplate Assembly Aft, Low Gear

Location

Loc Qty

Loc Code

FP

5

73817

1

74896

1

74938

3

November-18-11 9:15:04 AM

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Page 7

W/O:		WORK ORDER CHANGES					
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Picklist Print

November-18-11 9:15:04 AM

Work Order ID: 76606

76606

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 18/11/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN960JD10L NAS1149D0332J Purchased

No

280

Each

0.0000

2

2

AN960JD10L

Washer

AN3-37A

Purchased

No

280

Each

1,966.000

7

7

AN3-37A

Bolt

Location

Loc Qty

Loc Code

ST354

4

117619

4

ST518

1962

119086

1962

NAS1149D0363J

Purchased

No

280

Each

4,434.000

7

7

NAS1149D0363J

Washer

Location

Loc Qty

Loc Code

ST019

16

117505

16

ST295

3000

119537

3000

ST298

1418

117601

148

118077

1

118612

55

118968

1214

**

11/11/2011 (x2) 11/12/2011

**

11/12/2011

**

11/12/2011

X7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 76606 M.L.J
11/11/18

RELEASED
UP 09.03.03
per ECN 09-538

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	1	PORT HADLOCK, WA	
CHECKED	2	DRAWING NO.	REV. A
MFG. APPR.	3	D3804	SHEET 1 OF 5
APPROVED	4	TITLE	SCALE
DE APPR.	5	SKIDTUBE ASSEMBLY, 206A/B	NTS
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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RELEASED
Q 09.03.03



DESIGN	99	DART AEROSPACE USA, INC	
DRAWN		PORT HARDLOCK, WA	
CHECKED	9	DRAWING NO.	REV. A
MFG. APPR.	E	D3804	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.	9	SKIDTUBE ASSEMBLY, 206A/B	NTS
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

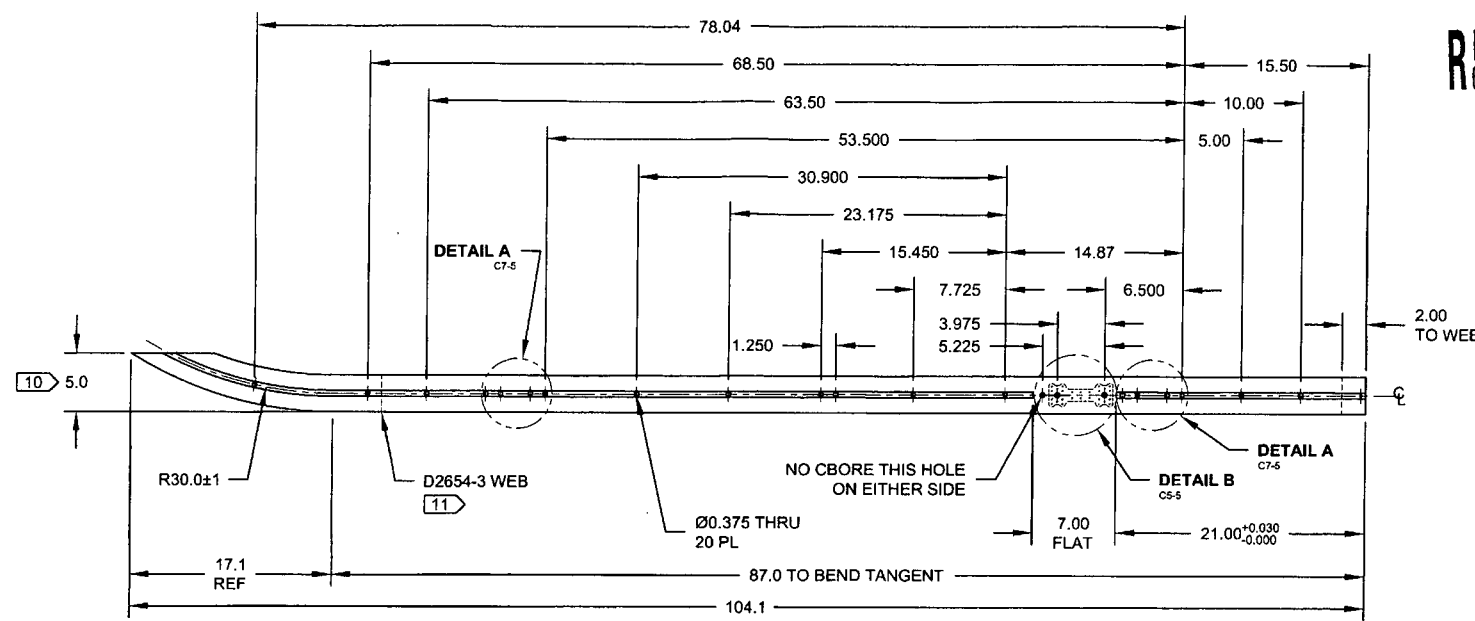
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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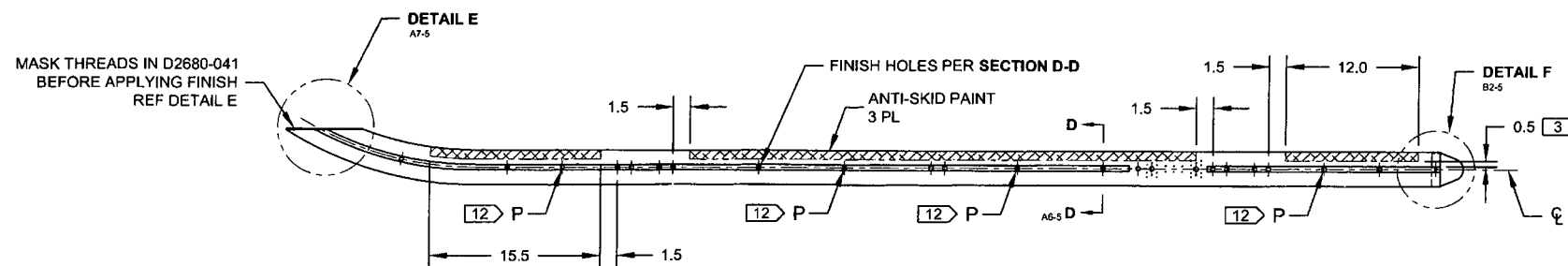
NOTE: Date & initial all entries

76606

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09.03.03



D3804-043 BENDING/DRILLING DETAIL



D3804-043 ASSEMBLY/FINISHING DETAIL

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 3 OF 5
APPROVED	97	TITLE	SCALE
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W/O:		WORK ORDER CHANGES					
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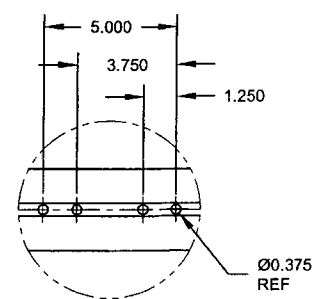
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

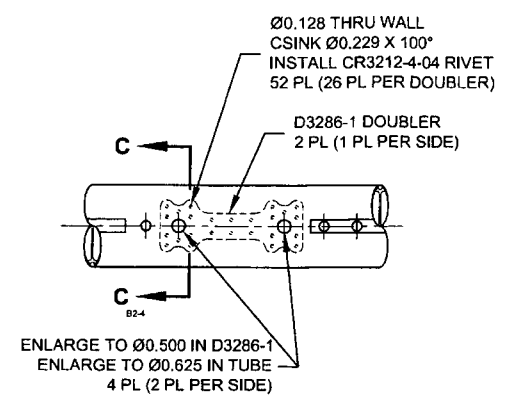
NOTE: Date & initial all entries

76606

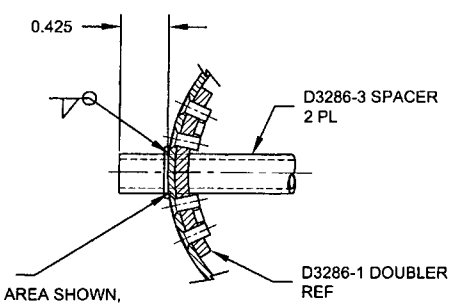
RELEASED
09.03.03



DETAIL A
D6-2
C2-2
D6-3
C2-3
SCALE NONE

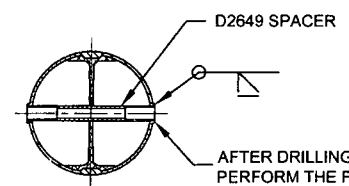


DETAIL B
C3-2
C3-3
SCALE NONE



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH

SECTION C-C
C6-4
PARTIAL SECTION
SCALE NONE



SECTION D-D
A4-2
A4-3
FOR Ø0.375 HOLES ONLY
SCALE NONE

- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

DESIGN	47	DART AEROSPACE USA, INC	
DRAWN	47	PORT HADLOCK, WA	
CHECKED	47	DRAWING NO.	REV. A
MFG. APPR.	47	D3804	SHEET 4 OF 5
APPROVED	47	TITLE	SCALE
DE APPR.	47	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

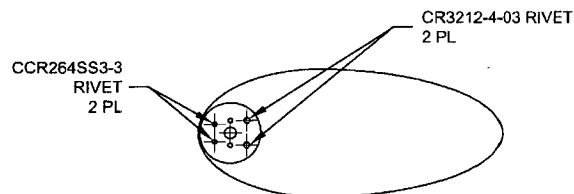
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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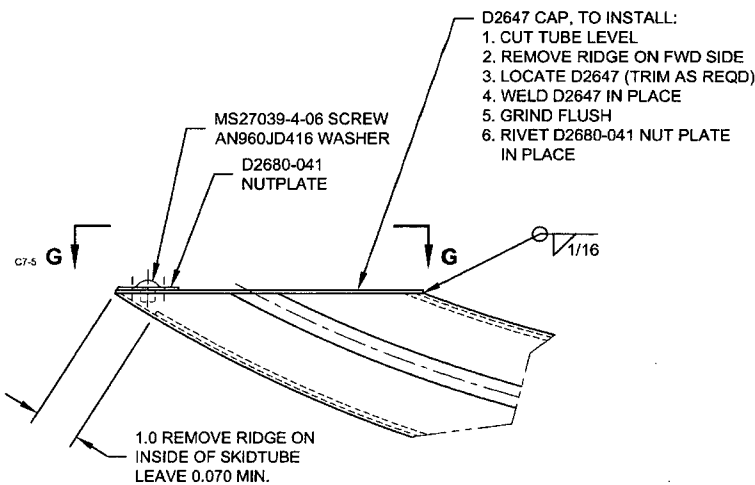
NOTE: Date & initial all entries

76606

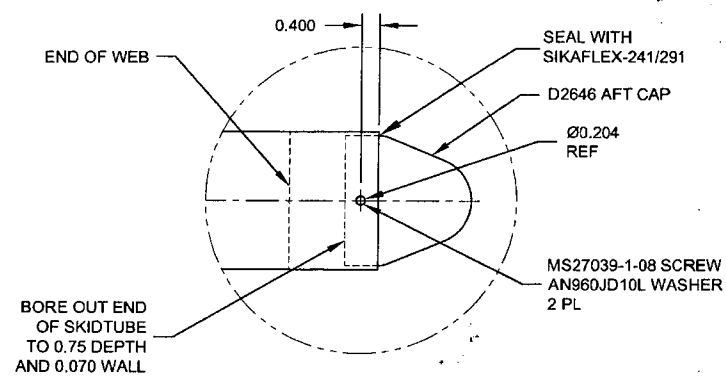
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97 03 03



VIEW G-G
SCALE NONE A7-5



DETAIL E
SCALE NONE B7-2 B7-3



DETAIL F
SCALE NONE B2-2 B2-3

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 5 OF 5
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NOTE: Date & initial all entries

NO. 278

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliot
Job number: 766119
Part number: 206-642-151
Description: 206 skid tube
Welding Process: Tig ☒ Mig ☐
Base material: Aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Sal Dunn Date of Test Coupon 11-12-20
Welder Barclay Elliot Date of Test Coupon 11-12-20

The above named individual is qualified in accordance with AWS D17.1.2001 to weld